

**In the Claims**

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please amend pending claims 1, 4-5, 7, 11 as noted below.

1. (Currently Amended) A method of diagnosing a fault between a subscriber having a subscriber terminal and a network comprising the steps of:  
providing with a diagnostic unit a diagnostic website  
receiving, through the diagnostic website with the diagnostic unit, a communication from a subscriber experiencing a problem with a network;

determining with said diagnostic unit configuration information of said subscriber terminal from portions of said communication generated by the subscriber terminal; and

communicating forwarding, with said diagnostic unit, said configuration information to with a selected network element.

packet analyzer, Snapper  
Ping Back up server  
Modem poll

Subscriber terminal or Inter-  
connect & Switch

2. (Previously Presented) The method of claim 1 wherein said step of receiving comprises utilizing at least one Fault Tolerant Protocol stack to allow communication between said subscriber and said diagnostic unit for diagnosis purposes when the subscriber terminal is unable to communicate with the network.

3. (Previously Presented) The method of claim 2 wherein said at least one Fault Tolerant Protocol stack permits communication with said subscriber when said subscriber terminal is misconfigured.

4. (Currently Amended) The method of claim 1 wherein ~~said selected~~ the network element comprises a the internet and an access network managed by an internet service provider, and the diagnostic unit is installed within the access network and the network element is connected to the diagnostic unit through the internet. ~~associated with at least a portion of the network.~~

5. (Currently Amended) The method of claim 1 additionally ~~wherein said step of forwarding comprises~~ comprising forwarding said configuration information electronically to a support operator.

6. (Original) The method of claim 2 wherein said step of receiving further comprises providing communication with said network through said at least one Fault Tolerant Protocol stack and said diagnostic unit.

7. (Currently Amended) The method of claim 1 ~~wherein said step of determining configuration information includes~~ additionally comprising obtaining an identification of said subscriber.

8. (Original) The method of claim 7 wherein said step of obtaining an identification of said subscriber includes determining a username of said subscriber.

9. (Original) The method of claim 8 wherein said step of obtaining an identification of said subscriber includes obtaining at least one of authentication information associated with said username, a phone number of said subscriber and a time stamp.

10. (Original) The method of claim 1 wherein said step of determining includes the step of emulating with said diagnostic unit at least one of login services to said subscriber, authentication services to said subscriber, e-mail services to said subscriber and the Internet to said subscriber.

11. (Currently Amended) The method of claim 1 wherein said step of determining includes ~~the step of analyzing with said diagnostic unit at least one of:~~

- ~~(a) data sent by said subscriber; and~~
- ~~(b) the format of data sent by said subscriber.~~

12. (Original) The method of claim 1 wherein said step of determining includes the step of negotiating a protocol between said subscriber and said diagnostic unit, said protocol selected

from the group consisting of modem training, network control protocols, authentication protocols, compression protocols and upper layer protocols.

13. (Original) The method of claim 1 wherein said step of determining includes the step of authenticating a password supplied by said subscriber for an Internet Service Provider (ISP) Net.

14. (Original) The method of claim 1 wherein said step of determining further comprises the steps of:

    sending an e-mail to a diagnostic unit from said subscriber; and  
    receiving an e-mail from said diagnostic unit by said subscriber.

15. (Original) The method of claim 7 further comprising the step of identifying said subscriber by said identification information within a trouble ticketing system of said service provider.

16. (Original) The method of claim 15 further comprising the steps of prioritizing said subscriber by said identification information within said trouble ticketing system of said service provider.

17. (Previously Presented) A method of providing network access for a subscriber comprising the steps of:

    providing a diagnostic unit in communication with a network;  
    receiving, with said diagnostic unit, a communication from a subscriber unable to communicate with a desired network element; and  
    allowing communications between said subscriber and said diagnostic unit by accepting data from said subscriber in a source protocol inconsistent with a network element protocol of a selected network element; establishing a communication link with the subscriber and sending an indication of the data received from the subscriber to the selected network element in a protocol consistent with the network element protocol.

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18. (Original) The method of claim 17 wherein said step of allowing comprises utilizing at least one fault tolerant protocol stack.

19. (Previously Presented) A diagnostic unit comprising:  
a processor in communication with a subscriber and with a network; and  
storage associated with said processor, said storage capable of storing instructions for causing said processor to receive data from said subscriber and to determine configuration information of said subscriber wherein said instructions further include instructions for accepting data from said subscriber in a source protocol inconsistent with a network element protocol of a selected network element; establishing a communication link with the subscriber and sending an indication of the data received from the subscriber to the selected network element in a protocol consistent with the network element protocol.

20. (Original) The diagnostic unit of claim 19 wherein said instructions further include instructions for causing said processor to forward said configuration information to a selected network element.

21. Canceled